

**GLENN DREYER AND** Mellon post-doctoral fellow Wei Ying Wong continued an invasive species survey project sponsored by the Arboretum and the Goodwin-Niering Center for the Environment. During Fall 2010, a 10-page survey was mailed to 1,000 randomly selected residents of New Milford, Conn., with questions about people's understanding of invasive species facts and issues. Two other populations were surveyed last year, and data analysis was ongoing.

New Assistant Professor of Anthropology Anthony Graesch began using the Samuel Bolles Farm site for his Historical Anthropology course and has expressed interest in using this and other parts of the Arboretum in his research program. Graesch and Dreyer led a very well-attended public walk of the Bolles Farm site this spring. Last fall Dreyer gained possession of two boxes of the late Richard Goodwin's Arboretum land files, which had been missing since Dr. Goodwin's death. These will be added to the growing archive of land history information.

Two undergraduates worked with Assistant Professor of Botany Chad Jones to map the distribution of oriental bittersweet in the Bolleswood Natural Area and to assess the factors impacting the distribution of the species. They found that the single biggest factor is distance to the nearest adult plant of the species. Jones has also been using data from the long-term permanent plots in the Bolleswood to test current methods for modeling the potential distributions of invasive species.

Dreyer, Jones and Nels Barrett '78 of the USDA Natural Resources Conservation Service continued documenting the meadow restoration project in the open fields along the east end of Benham Avenue. Detailed presence and abundance data was collected for the second time in Summer 2010, and a manuscript on this project was submitted to a professional journal.

Andrew Margenot '10 conducted an independent study, "Characterization of a Loess Aquic Halporthod in Southeastern Connecticut," with Professor of Geology Doug Thompson, in which he analyzed a soil pit in the Arboretum. Senior Lecturer Beverly Chomiak spent two semesters working with Will Brown '11 investigating brittle structures in rock outcroppings at Mamacoke Island and other sites in southeastern Connecticut. Mike Marshall '11 wrote an honors thesis, "An Analysis of Wind Resources and the Feasibility of Wind-Energy Generation on the Connecticut College Campus," supervised by Thompson. Marshall visited many parts of the Arboretum and used wind data collected from the two data towers on the main campus.

Dreyer and Jones have been working with the New England Plant Conservation Program to monitor endangered plants. Two occurrences of rare species are located within the Arboretum, a bullrush in the Mamacoke area and a milkweed along an electric transmission right of way. The plants are visited and evaluated annually and some management is performed to reduce competition as needed.

As president of the Connecticut Botanical Society, Dreyer convened a committee to develop a new checklist of all native and naturalized plants growing outside of cultivation in Connecticut. The last such list was published in 1979, and the Arboretum is a cosponsor of this research project, along with the Botanical Society. Jones has been a very active participant in the work.

The Arboretum is also a cosponsor of the Connecticut's Notable Trees Project, which documents both the largest trees in the state and those related to historic persons, places or events. The project website (<http://notabletrees.conncoll.edu>) is hosted by the College and contains information on approximately 3,000 trees.

During Spring 2010 Shannon Kearney-Smith of the Connecticut DEP Wildlife Division monitored chimney swift nesting on campus, hosted by Professor of Biology Robert Askins. Populations of these birds are in dramatic decline, and biologists are tracking them around the state.

Many college courses, particularly in the natural sciences, use the Arboretum on a regular basis. Classes that regularly use the Arboretum continued to do so in 2010-11 were:

Ant 390 – Historical Anthropology

Bio 103 – Introduction to Evolution

Bio 105 – Organisms

Bio 204 – Ornithology

Bio 207 – Ecology

Bio 215 – Invertebrate Zoology

Bio 224 – Animal Behavior

Bot 115 – Introduction to Botany

Bot 117 – Introduction to Ethnobotany

Bio 413 – Estuarine Ecology

Bot 225 – Systematic Botany and the Local Flora

Bot 315 – Ecology of Terrestrial and Wetland Plant Communities

ES 115 – Introduction to Physical Geology

ES 314 – Earth Surface Processes and Landforms

ES 210 – Hydrology

ES 259 – Mining and the Environment

ES 312 – Introduction to Vector-based GIS

ES 313 – Introduction to Raster-based GIS



# TEACHING *and* RESEARCH



*clockwise from top left:* STUDENTS IN PROFESSOR ANTHONY GRAESCH'S HISTORICAL ANTHROPOLOGY COURSE USE SURVEYING TECHNIQUES TO DOCUMENT THE SAMUEL BOLLES FARMHOUSE SITE.; THE SAMUEL BOLLES FARMHOUSE WAS PICTURED IN A LOCAL NEWSPAPER AFTER IT BURNED TO THE GROUND IN JUNE 1943.; SENIOR LECTURER BEVERLY CHOMIAK SUPERVISED STUDENT RESEARCH ON THE GEOLOGY OF MAMACOCKE ISLAND.

*opposite page from top:* PROFESSOR CHAD JONES IDENTIFIES A GRASS IN THE MEADOW RESTORATION AREA; ECOLOGICAL AND SOCIAL SCIENCE RESEARCH WAS CONDUCTED WITH INVASIVE SPECIES SUCH AS ASIATIC BITTERSWEET VINE (*CELASTRUS ORBICULATUS*) DURING THE PAST YEAR AND A HALF.; A SMALL POPULATION OF THE RARE PURPLE MILKWEED (*ASCLEPIAS PURPURESCENS*) WAS MONITORED AND MAINTAINED.

